

Human Mouse Drosophila C.elegans	1 MATAGGGSGADPGSRGLLRLLSFCVLLAGLCRGNVERKIVIPLNKTAPCVRLLNATHQI MATTRGGSGPDPGSRGLL-LLSFVVLAGLCGGSVERKIVIPLNKTAPCVRLLNATHQI MEMR----LNAASIWL-ILSYGATIAQGER---TRDKMYEPIGG-ASCFRRLLNGTHQT -----MKKWLW---IVLIIAGIRCDGFSDQVFRTLFIGEGNACYRTFNKTHEF 61 GCQSSISGDTGVIVHVEKEEDLQWVLTDG---P--NPPYMLLESKFTRDLMEKLKGR GCQSSISGDTGVIVHVEKEEDLKWKVLTDG---P--NPPYMLLEGKLFTRDVMEKLKGT GCSSTYSGSVGVHLINVEADLEFLSSP---P--SPPYAPMIPPHLFTRNNLMRLKEA GCQANRENENGLIVRIDKQEDFKNLSCWNSSFYPKYSGKYWALLPVNLIRRDTISQLKSS 114 168 Human Mouse Drosophila C.elegans
	17 TSRIAGLAVSLTK---P-SPASGFSPSVQCPNDGFGVYSNSYGPFAHCRCIQWNSLG- TSRIAGLAVTLAK---P-NSTSSFSPSVQCPNDGFGIYSNSYGPFAHKCTLWNELG- GPKNISVVLINR---T-NQMKQFSHELNCNPQYSGLNSTS-ETCDASNPAKNWNPWG- -KCLSGIVLYNSGESIHPGDESTAASHDAECPNAASDYYLQDKNEEYCERKINSRGAI 171 228 Human Mouse Drosophila C.elegans
	17 NGLAYEDFSFPIFLLEDENETKVIKQCYQDHNLSQLNGSAPTFLCAMQLFSHMHAVISTA NGLAYEDFSFPIFLLEDENETKVIKQCYQDHNLSQLNGSAPSFLCAMQLFSHMHAVISTA TGLLHEDFPFPPIYYIADLDQVTKLEKCFQDFNNHNYETHALRSLCAVEVKSFMSAAVNTE DGLMKIDWRIQMVFIDNSTDLEIIIEKCYSMFNPKEDGSSGYPYCGMSFRLANMAAGNSE 232 275 Human Mouse Drosophila C.elegans
	17 TCMRR-SS---IQSTFSIN-PEIVCDPLSDYNVWSMLKP----INTTGTLPK--DDRV TCMRR-SF---IQSTFSIN-PEIVCDPLSDYNVWSMLKP----INTSVGLEP--DVRV VCMRR-TN---FINNLGG---SKYCDPLEGRNVSPPCTPESQQSETTLETVHT--NEKF ICYRRGKNDAKLFQMNIDSQDAPQLCGAMHSDNIFAFPTP----IPTSPTNETIITSKY 278 330 Human Mouse Drosophila C.elegans
	17 VVAATRLDSRSFFWNVAPGAESAVASFVTLAAAAL---QKAPDVTTL-PRNVMFVFF VVAATRLDSRSFFWNVAPGAESAVASFVTLAAAAL---HKAPDVTTL-SRNVMFVFF ILVTCRLDTTMFDGVGLGAMDSLMGFAVFTHVAYLLK---QLLPPQSKD-LHNVLFVTF MMVTARMDSFGMIPEISVGEVSVLTSIISVLAARSMGTQIEKWQKASNTSNRNVFFAFF 331 384 Human Mouse Drosophila C.elegans
	17 QGETFDYIGSSRMVYDMEKGKFP---VQLENVD--SFVELGQVALRTSLELWMHTDPVS QGETFDYIGSSRMVYDMENGKFP---VRLENID--SFVELGQVALRTSLLWMHTDPMS NGESYDYIGSQRFVYDMEKLQFP---TESTGTPPIAFDNIDFMLDIGTLDDISNIKLHA NGESLDYIGSGAAAYQMENGKFPQMI RSDRTHIPIRPNELDYILEVQQIGVAKGRKYYV

FIGURE 1A

331

384

Human	<u>QGETFDYIGSSRMVYDMEKGKF</u> ---- <u>VQLENVD</u> --SFVELGQVALRTSLELWMHTDPVS
Mouse	<u>QGETFDYIGSSRMVYDMENGKF</u> ---- <u>VRLENID</u> --SFVELGQVALRTSLELWMHTDPMS
Drosophila	<u>NGESYDYIGSQRFVYDMEKLQFP</u> ----TESTGTPPIAFDNIDFMLDIGTLDDISNIKLHA
C.elegans	<u>NGESLDYIGSGAAAYQMENGKFPQMIRSDRTHIHIPIRPNELDYILEVQQIGVAKGRKYYV</u>
	385
Human	<u>QK-NESVRN</u> ---QVEDLLATLEKSGAGVPAVILRRPNQSPLPPSSLQRFLR-ARNISGV
Mouse	<u>QK-NESVKN</u> ---QVEDLLATLEKSGAGVPEVVRLAQSQALPPSSLQRFLR-ARNISGV
Drosophila	LN-GTTLAQ---QILERLNNYAKS-PRYGFNLNIQSEMSAHLPPPTSAQSFLRRDPNFNAL
C.elegans	HVDGERYQQNKTQTDRIDRERGLRSHAFDLEKPSGSGDRVPPASWHSFAKADAHVQSV
	440
Human	<u>VLADHSGAFHNKYYQSIYDTAENINVSY</u> P----EWLSPEEDLFNTDT----AKALADVA
Mouse	<u>VLADHSGSFHNRYQSIYDTAENINV</u> TYP----EWQSPEEDLFNTDT----AKALANVA
Drosophila	ILNARP---TNKYYHSTYDDADNVDFTYANTSKDFTQLTEVNDFKSLNPDSLQMKVRNV
C.elegans	LLAPYG---KEYEYQRVNSILDNEWTED---EREKAIQEIEAVSTA---ILAAAADYV
	492
Human	<u>TVLGRALYELAGGTNFSDTVQADPQT</u> VTTRLLYG-FLIKANNNSWFQSIILRQDLRSYLGDP
Mouse	<u>TVLARALYELAGGTNFSSIQADPQT</u> VTTRLLYG-FLVRANNNSWFQSIILKHDLRSYLDLDRP
Drosophila	SIVAMALYQTITGKEYGTGVANPLMADEFLYC-FLQSADCPLFKAAASYPGSQ--LTNLP
C.elegans	GVETDEVVAKVD-KKLITTIFDCLITSNFWFDCDFMQKLDGGRYHKLFNSYGFNQKSTYI
	551
Human	LQHYIAVS--SPTNTTYVVQYALANLTGTVVNLTREQCQDPSKVPSENKDLYEYSWVQGP
Mouse	LQHYIAVS--SPTNTTYVVQYALANLTGKATNLTREQCQDPSKVPNESKDLYEYSWVQGP
Drosophila	PMRYISVLGGSQESSGYTYRLLGYLLSQLQPDIIHRDNCTD---LP----LHYFAG---
C.elegans	SMESHTAF---PTVLHWLTIFALGSDKETLNVKSEKSCSHLGQFQ---AMYTYTWQPNP
	609
Human	LHSNETDRLPRCVRSTARLARALSPAFELS---QWSSTEYSTWTESRWKDIRARIFLIAS
Mouse	WNSNRTERLPQCVRSTVRLARALSPAFELS---QWSSTEYSTWAESRWKDIQARIFLIAS
Drosophila	FN-N---IGECRLTTQNYSHALSPAFLIDGY-DWSSGMYSTWTESTWSQFSARIFLRPS
C.elegans	YTGN----FSCLKSAIVKKVMVSPAVDSQTPEEMNTRYSTWMESVYIIESVNLYLMED
	665
Human	KELELITLTVGFG-ILIFSLIVTYCINAKADVLFIAPREPGAVSY-
Mouse	NELEFITLIVGFS-TLVFSLIVTYCINAKADVLFVAPREPGAVSY-
Drosophila	NVHQVTTLSVGIV-VLIISFCLVYIISSEVLFEDLPASNAALFG
C.elegans	ASFETYTMILIAVISALLSIFAVGRCSETTFIVDEGEPAEGGEPL-
	666
	709

FIGURE 1B